

IN THE CLAIMS:

1. (currently amended) A method for reconstructing an image of an object in a computed tomographic imaging system, said method comprising:

scanning an object using a computed tomographic (CT) imaging apparatus to acquire projections of the object;

determining, utilizing the projections, a set of thresholds ~~utilizing said projections;~~

associating selected smoothing kernels with ~~said the~~ the thresholds;

~~utilizing said,~~ via the computed tomographic imaging system, the smoothing kernels and ~~said the~~ projections to produce three-dimensional smoothed projections in accordance with ~~said the~~ the thresholds; and

filtering and backprojecting the three-dimensional smoothed projections to generate an image of the object in the computed tomographic imaging system.

2. (currently amended) A method in accordance with Claim 1 wherein said determining, utilizing the projections, a set of thresholds comprises determining a set of four thresholds ~~comprising including~~ a high threshold, a medium threshold, a low threshold, and a very low threshold, and wherein ~~a one of the~~ one of the smoothing ~~kernel~~ kernel ~~kernel~~ is associated with each ~~said threshold~~ of the thresholds.

3. (currently amended) A method in accordance with Claim 2 wherein a one-to-one correspondence exists between ~~said the~~ the smoothing kernels and ~~said the~~ the thresholds.

4. (canceled)

5. (currently amended) A method in accordance with Claim 1 wherein said utilizing the smoothing kernels and ~~said the~~ projections ~~to produce smoothed projections~~ comprises utilizing a smoothing gain factor to modulate smoothing of ~~said the~~ the smoothed projections.

6. (currently amended) A method in accordance with Claim 5 wherein ~~said the~~ the smoothing gain factor is a function of ~~said the~~ the projections.

7.-14. (canceled)

15. (currently amended) A CT imaging apparatus comprising:

a detector;

a source configured to project a beam of x-rays toward said detector; and

a computer system operatively coupled to at least one of said detector and said source,
said computer system comprising:

a first module configured to scan an object to acquire projections of the object;

a second module configured to determine, utilizing the projections, a set of thresholds
~~utilizing said projections;~~

a third module configured to associate selected smoothing kernels with ~~said the~~
thresholds;

a fourth module configured to utilize ~~said the~~ smoothing kernels and ~~said the~~
projections to produce three-dimensional smoothed projections in accordance with ~~said the~~
thresholds; and

a fifth module configured to filter and backproject the three-dimensional smoothed
projections to generate an image of the object.

16. (currently amended) An apparatus in accordance with Claim 15 wherein, to
determine ~~a the~~ set of thresholds, said second module is configured to determine a set of four
thresholds ~~comprising including~~ a high threshold, a medium threshold, a low threshold, and a
very low threshold[[,]] and to associate ~~a one of the~~ smoothing ~~kernel kernels~~ with each ~~said~~
~~threshold of the thresholds.~~

17. (currently amended) An apparatus in accordance with Claim 16 wherein ~~said~~
~~the~~ smoothing kernels and ~~said the~~ thresholds exist in one-to-one correspondence.

18. (canceled)

19. (currently amended) An apparatus in accordance with Claim 15 wherein, to
utilize the smoothing kernels and ~~said the~~ projections to produce the three-dimensional

smoothed projections, said fourth module is configured to utilize a smoothing gain factor to modulate smoothing of ~~said the~~ smoothed projections.

20. (currently amended) An apparatus in accordance with Claim 19 wherein ~~said the~~ smoothing gain factor is a function of ~~said the~~ projections.

21.-28. (canceled)

29. (currently amended) A ~~computer-readable-computer storage~~ medium having comprising instructions thereon, said instructions configured to instruct a computer to:

determine, utilizing projections obtained by scanning an object, a set of thresholds
~~utilizing projections obtained by scanning an object;~~

associate selected smoothing kernels with ~~said the~~ thresholds;

utilize the smoothing kernels and ~~said the~~ projections to produce three-dimensional smoothed projections in accordance with ~~said the~~ thresholds; and

filter and backproject the three-dimensional smoothed projections to generate an image of the object.

30. (currently amended) A ~~computer-readable-computer storage~~ medium in accordance with Claim 29 wherein, to determine a ~~the~~ set of thresholds, said ~~computer-readable-medium-is~~ instructions are further configured to instruct the computer to determine a set of four thresholds ~~comprising~~ including a high threshold, a medium threshold, a low threshold, and a very low threshold[[,]] and to associate a one of the smoothing ~~kernel~~ kernels with each ~~said threshold of the thresholds~~.

31. (currently amended) A ~~computer-readable-computer storage~~ medium in accordance with Claim 30 wherein ~~said the~~ smoothing kernels and ~~said the~~ thresholds exist in one-to-one correspondence.

32. (canceled)

33. (currently amended) A ~~computer-readable-computer storage~~ medium in accordance with Claim 29 wherein, to utilize the smoothing kernels and ~~said the~~ projections to produce the three-dimensional smoothed projections, said ~~machine-readable-medium-is~~

instructions are further configured to instruct the computer to utilize a smoothing gain factor to modulate smoothing of ~~said the~~ smoothed projections.

34. (currently amended) A ~~computer-readable~~ computer storage medium in accordance with Claim 33 wherein ~~said the~~ smoothing gain factor is a function of ~~said the~~ projections.

35.-42. (canceled)